

**Abstract**

**APPARATUS AND METHOD FOR CURING  
MATERIALS WITH RADIATION**

5       A hand held dental instrument for curing light-curable compounds  
comprises a housing and an array of solid state, light emitting junctions or dies  
for generating light having wavelengths within a narrow band of wavelengths  
(e.g. 400-500 nm). Preferably, a peak wavelength of 470 nm is generated. The  
device further comprises an optical fiber light pipe for capturing the light and  
transmitting a beam of the light to a work surface containing a light-curable  
10       compound. An optical lens or lenses may be used for focusing the light into the  
light pipe.